Connecticut 2007 Annual Air Monitoring Network Plan



Table of Contents

Acronyms and Abbreviations	3
Introduction	4
Network Overview	
Monitoring Site Network Map	5
Parameter Network Maps	6
PM _{2.5} FRM Network	<i>6</i>
PM ₁₀ FRM Network	<i>6</i>
PM Speciation Network	<i>6</i>
Continuous PM _{2,5} Network	7
Ozone Network	7
PAMS Network	7
NO _x Network	8
CO Network	8
SO ₂ Network	8
PM _{2.5} Annual Design Value Map (2004-2006)	9
PM _{2.5} Daily Design Value Map (2004-2006)	
Ozone Design Value Map (2004-2006)	
Proposed Network Changes	
Monitoring Site Information	
Bridgeport – Edison School	
Bridgeport – Roosevelt School	
Cornwall – Mohawk Mountain	14
Danbury – Western Connecticut State University	15
East Hartford – McAuliffe Park	16
Greenwich – Point Park	
Groton – Avery Point	
Groton – Fort Griswold	
Hartford – Brainard Field	
Hartford – Morgan Street Courthouse	
Madison – Hammonasset State Park	
Mansfield - DOT	
Middletown – Central Valley Hospital	
New Haven – Agricultural Center	
New Haven – Criscuolo Park	
New Haven – State Street	
New Haven – Woodward Avenue Fire House	
Norwalk – Health Department	
Norwich – Courthouse	
Stafford – Shenipsit State Forest	
Stamford – Sherilpsit State Forest	
Stratford – Lighthouse	
Thomaston – Waste Water Treatment Plant	
Waterbury – Meadow & Bank Street	
Westport – Sherwood Island State Park	
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Acronyms and Abbreviations

AMTIC - Ambient Monitoring Technical Information Center

AQS - Air Quality System

CAA - Clean Air Act

CFR - Code of Federal Regulations

CO – carbon monoxide

CSA - combined statistical area

CTDEP - Connecticut Department of Environmental Protection

CV - coefficient of variance

DAS – data acquisition system

DQA - data quality assessment

DQO - data quality objective

EPA - Environmental Protection Agency

FEM - Federal Equivalent Method

FRM - Federal Reference Method

GC - gas chromatography

GC/MS - gas chromatography/mass spectrometry

GIS – geographical information systems

GPS - global positioning system

HAP - hazardous air pollutant

HPLC - high performance liquid chromatography

ICP/MS – inductively coupled plasma/mass spectrometry

IMPROVE - Interagency Monitoring of Protected Visual Environments

10 - Inorganic

IT - information technology

LAN - local area network

MQO - measurement quality objectives

MPA - monitoring planning area

MSA - metropolitan statistical area

NAAQS - National Ambient Air Quality Standards

NIST - National Institute of Standards and Technology

NO_x – nitrogen oxides

NPAP - National Performance Audit Program

NSPS - New Source Performance Standard

OAQPS – Office of Air Quality Planning and Standards

OARM - Office of Administration and Resources Management

OIRM - Office of Information Resources Management

OMB - Office of Management and Budget

ORD - Office of Research and Development

PAMS - Photochemical Assessment Monitoring Stations

P&A - precision and accuracy

PE - performance evaluation

 $PM_{2.5}$ – fine particulate matter (2.5 microns)

 PM_{10} – respirable particulate matter (10 microns)

 $PM_{10-2.5}$ – coarse particulate matter (PM_{10} – $PM_{2.5}$)

PMSA - primary metropolitan statistical area

QA - quality assurance

QA/QC - quality assurance/quality control

QAPP - quality assurance project plan

QA Redbook – most recent revision of EPA's Quality Assurance Handbook for Air Pollution Measurement Systems (this multi-volume guidance document was once provided in red binders).

QMP – quality management plan

RH - relative humidity

RPD - relative percent difference

SIP - State Implementation Plan

SLAMS – state and local monitoring stations

SO₂ – sulfur dioxide

SOP - standard operating procedure

SPMS – special purpose monitoring stations

STN - Speciation Trends Network

TSA - technical system audit

TSP – total suspended particulate

VOC - volatile organic compound

Introduction

The Connecticut Department of Environmental Protection (CTDEP) regulates air quality to protect public health and the environment. Monitoring data is a crucial component of regulations used to determine compliance with the Federal Environmental Protection Agency (EPA) primary and secondary air quality standards. Other important uses of these monitors include: support of timely reporting of the Air Quality Index (AQI) and issuing air quality forecasts, support of long-term health assessments, and tracking long-term air quality both to gauge effectiveness of emission control and abatement strategies and to quantify accuracy of supporting model evaluations.

Air pollution comes from many sources. Cars, trucks, buses, factories, power plants and even fires can create pollution that will harm our environment. Determining the amount of air pollution through monitoring is essential to effective control of air pollution.

Today, the CTDEP has 25 permanent pollutant monitoring stations.

Over the last 20 years, monitored levels of the criteria pollutants have decreased significantly due to various control measures implemented by CTDEP and the EPA.

Air monitoring began in Connecticut in the 1950's, when CTDEP started to monitor for total suspended particulate. In the 1970's, CTDEP installed its first computerized network and started daily pollution forecasting with the Pollution Standards Index.

The decade of the 1980's was a transition for air quality. With new automobiles equipped with catalytic converters, nitrogen dioxide (NO_2), carbon monoxide (NO_2), carbon monoxide (NO_2), and volatile organic compounds (NO_2) were greatly reduced. Ozone and particulate matter with diameter 10 microns or less (NO_2) have been greatly reduced, although Connecticut still remains in non-attainment for ozone. The phasing out of leaded gasoline dropped the lead pollution to lower levels. New air pollution control technologies for stationary sources, including lower sulfur fuels, reduced sulfur dioxide, NO_2 and NO_2 .

In the 1980's, CTDEP instituted the ambient dioxin monitoring program and in 1992, CTDEP established the Photochemical Assessment Monitoring Stations (PAMS) network and by 1995 had the capability of monitoring over 100 toxic pollutants.

In 1997, the fine particulate ($PM_{2.5}$) National Ambient Air Quality Standards (NAAQS) were promulgated, and by 1999, the CTDEP established a comprehensive $PM_{2.5}$ Federal Reference Method (FRM) network. Today, the primary objective of the air monitoring network is to adequately characterize and measure ozone and the precursors of ozone, and $PM_{2.5}$ and the precursors and chemical components of fine particle matter.

This annual network review, in accordance with the new monitoring regulations implemented on September 27, 2006, will be made available to the public on the <u>ct.gov</u> website for a 30-day comment period and then submitted to EPA Region I by July 1st of each year for approval.

Network Overview

On September 21, 2006, the EPA reduced daily $PM_{2.5}$ NAAQS from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. Along with the new daily standard, new ambient air monitoring regulations were implemented. On September 27, 2006, the EPA amended its national air quality monitoring requirements. The changes focus on retaining but reshaping existing monitoring networks to ensure that monitors are concentrated in areas with air quality problems, where monitoring is most critical. The rule also will add more monitors capable of providing real-time air quality measurements.

There will continue to be a national network of monitors for the criteria pollutants, but the improved network will be more strategic and efficient. The rule will change the locations of some types of monitors, add new monitors for some pollutants, and allow states to shut down unneeded monitors for some pollutants.

The most significant feature of the new monitoring regulations is the establishment of new multi-pollutant monitoring sites. EPA and the states will add about 75 multi-pollutant NCore sites around the country. Monitoring multiple pollutants at the same site will help EPA improve air quality management by

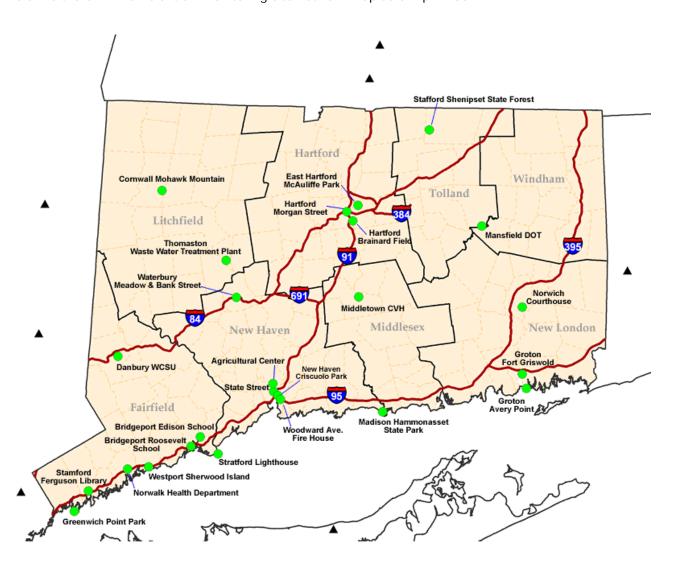
enhancing the Agency's ability to model and forecast air pollution. The sites also will provide real-time data for some pollutants, including particle pollution and groundlevel ozone. By requiring that these monitors be co-located with improved resolution, EPA's rule will enhance the ability of federal, state and local air quality experts to examine the effects of multiple air pollutants on health and the environment. EPA will locate 55 of these sites in urban areas and 20 in rural areas in order to enhance the understanding of how pollution travels and of the differences between air quality in urban and rural areas. Network plans for NCore sites are due by July 1, 2009, with the full network operational by January 1, 2011.

Although the NCore sites are not finalized, Connecticut has two sites that are on the proposed list: the Criscuolo Park site in New Haven and the Mohawk Mountain site in Cornwall. Although no PM coarse (PM_{10-2.5}; PM between 10 microns and 2.5 microns in diameter) standard was put forth in the final rule, PM_{10-2.5} monitoring will be required at the NCore sites in order to gather additional PM_{10-2.5} data for future rule-making efforts. Connecticut will be able to reduce monitoring for pollutants that are well below the standard such as sulfur dioxide, carbon monoxide and nitrogen dioxides; however, precursor/trace-gas measurements for these pollutants will be required at NCore sites.

The current network and the proposed network changes presented in this document are consistent with the new national air quality monitoring requirements.

Monitoring Site Network Map

Below is the CTDEP ambient air monitoring site network map as of April 2007.

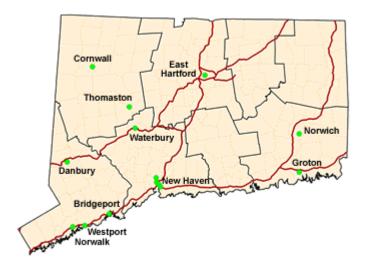


Parameter Network Maps

Below are network maps segregated by parameter with a description of sampling frequency and specific network or site qualifiers.

PM_{2.5} FRM Network

The CTDEP operates fourteen $PM_{2.5}$ FRM sites in the air monitoring network. Four of the sites, Criscuolo Park in New Haven, East Hartford, Westport and Norwich operate on an everyday sample schedule while all the other sites operate on a 1-in-3 day sample schedule. Two sites, Waterbury and Criscuolo Park in New Haven, operate colocated $PM_{2.5}$ FRM samplers on a 1-in-6 day sample schedule.



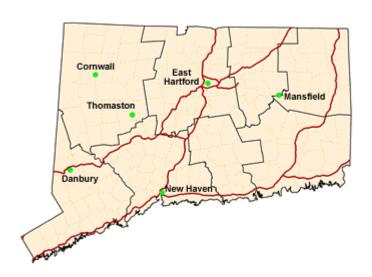
PM₁₀ FRM Network

The CTDEP operates six PM_{10} FRM sites in the air monitoring network. All sites are operated on a 1-in-6 day sample schedule. A colocated PM_{10} FRM sampler is operated on a 1-in-6 day sample schedule at the Waterbury site. All sites that operate PM_{10} FRM samplers, also operate $PM_{2.5}$ samplers, which provide $PM_{10-2.5}$ measurements.



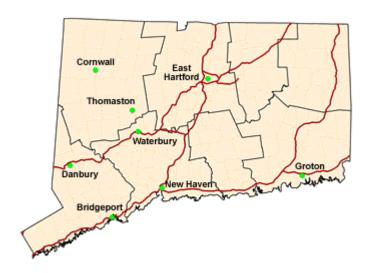
PM Speciation Network

PM_{2,5} chemical speciation measurements are being obtained at six sites in the CTDEP air monitoring network. The IMPROVE (Interagency Monitoring of Protected Visual Environments) site is located at the Cornwall site and the EPA STN (Speciation Trends Network) site is at the New Haven Criscuolo Park site. Both sites are operated on the same 1-in-3 day sample schedule and provide 24-hour integrated filter-base measurements. Continuous sulfate and continuous organic and elemental carbon sampling is being conducted at the Cornwall and Thomaston sites and is planned for the New Haven Criscuolo Park site. The Aethalometer used to measure black carbon and wood smoke PM is currently in operation at all six sites, as part of the Wood Smoke Toxics Study being conducted in 2006-08; most if not all of the Aethalometers will remain deployed after the study period.



Continuous PM_{2.5} Network

The CTDEP operates eight continuous $PM_{2.5}$ sites in the air monitoring network. All continuous $PM_{2.5}$ samplers are operated year-round and the measurements are sent to the EPA AIRNow website for AQI purposes on an hourly basis. The MetOne BAM is operated at the Cornwall, Danbury, Groton Fort Griswold, Waterbury and New Haven Criscuolo Park sites, while the Thermo FDMS 8500 is operated at the Bridgeport Roosevelt School, East Hartford, Thomaston and New Haven Criscuolo Park sites. In addition to both types of continuous $PM_{2.5}$ samplers, a continuous PM_{10} MetOne BAM is also operated at Criscuolo Park.



Ozone Network

The CTDEP operates eleven ozone sites in the air monitoring network. The ozone sampler at the Cornwall site is operated year-round while the remaining sites are operated from April 1st through September 30th. Ozone measurements are sent to the EPA AIRNow website for AQI purposes on an hourly basis.



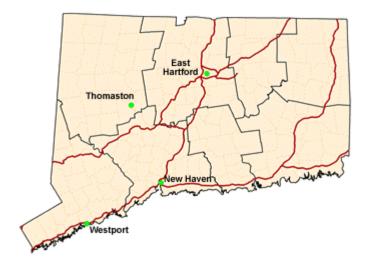
PAMS Network

The CTDEP operates three PAMS sites in the air monitoring network. PAMS measurements are obtained from June 1st through August 31st. PAMS sampling generates hourly measurements of 56 volatile organic compounds (VOCs), such as benzene and toluene, which are precursors to ozone formation. Carbonyl sampling is also done in conjunction with PAMS at the East Hartford site on a 1-in-3 day sample schedule from June 1st through August 31st; four three-hour samples are collected and analyzed for formaldehyde and acetaldehyde.



NO_x Network

The CTDEP operates four nitrogen oxide (NO_x) sites in the air monitoring network. All NO_x samplers are operated year-round. Nitrogen oxide (NO) and nitrogen dioxide (NO_2) measurements are obtained primarily to complement the PAMS measurements to study ozone formation.



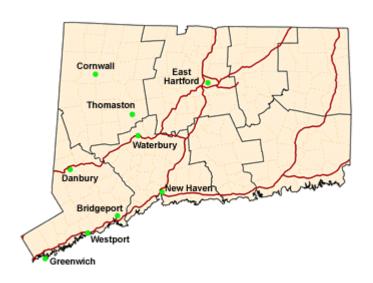
CO Network

The CTDEP operates seven carbon monoxide (CO) sites in the air monitoring network. All CO samplers are operated year-round. Trace-CO samplers are deployed at the Thomaston, Westport and New Haven Criscuolo Park sites.



SO₂ Network

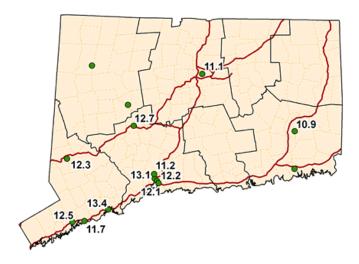
The CTDEP operates nine sulfur dioxide (SO_2) sites in the air monitoring network. All SO_2 samplers are operated year-round. Trace- SO_2 samplers are deployed at the Cornwall, Thomaston and New Haven Criscuolo Park sites.



PM_{2.5} Annual Design Value Map (2004-2006)

Below are the current annual design values for $PM_{2.5}$ using 2004 through 2006 data. $PM_{2.5}$ annual design values are calculated using the 3-year average of the respective annual averages. The current annual $PM_{2.5}$ standard is 15 $\mu g/m^3$.

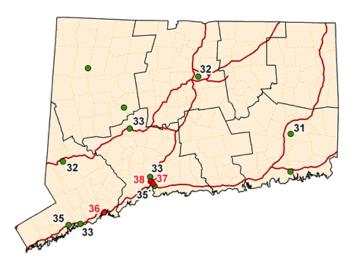
Site	Design Value (μg/m³)
Bridgeport	13.4
Danbury	12.3
East Hartford	11.1
New Haven – Ag. Center	11.2
New Haven – Criscuolo	12.2
New Haven – State St.	13.1
New Haven – Woodward	12.1
Norwalk	12.5
Norwich	10.9
Waterbury	12.7
Westport	11.7



PM_{2.5} Daily Design Value Map (2004-2006)

Below are the current daily design values for $PM_{2.5}$ using 2004 through 2006 data. $PM_{2.5}$ daily design values are calculated using the 3-year average of the annual 98th percentile values. As of 2006, the new, more stringent daily $PM_{2.5}$ standard is 35 $\mu g/m^3$. The previous daily standard was 65 $\mu g/m^3$. Final designations relative to the new standard will be required by December 2009 (becoming effective in April 2010), based upon measured data from 2006 through 2008. Currently, under the 1997 $PM_{2.5}$ NAAQS, all Connecticut monitors are measuring attainment for both the annual and daily $PM_{2.5}$ standards. However, Fairfield and New Haven Counties are currently designated nonattainment for the annual standard as part of the Greater New York City area.

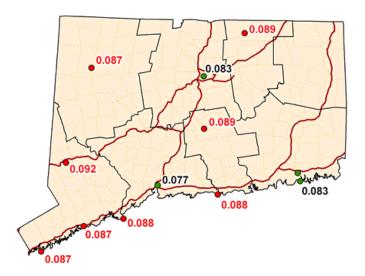
Site	Design Value (μg/m³)
Bridgeport	36
Danbury	32
East Hartford	32
New Haven - Ag. Center	33
New Haven - Criscuolo	37
New Haven – State St.	38
New Haven – Woodward	35
Norwalk	35
Norwich	31
Waterbury	33
Westport	33



Ozone Design Value Map (2004-2006)

Below are the current design values for ozone using 2004 through 2006 data. Ozone design values are calculated by taking the 3-year average of the annual 4th maximum daily maximum 8-hr ozone averages. The current 8-hr ozone standard is 0.08 ppm. Currently the entire state of Connecticut is designated as non-attainment for ozone.

Site	Design Value (ppm)
Cornwall	0.087
Danbury	0.092
East Hartford	0.083
Greenwich	0.087
Groton	0.083
Madison	0.088
Middletown	0.089
New Haven – Criscuolo	0.077
Stafford	0.089
Stratford	0.088
Westport	0.087



Proposed Network Changes

The CTDEP network changes planned in the near- to mid-term involve establishing a network that is consistent with the new regulations and the EPA National Monitoring Strategy. This includes continuing to establish the Cornwall Mohawk Mountain and New Haven Criscuolo Park sites as probable NCore sites while maintaining a comprehensive fine particle and ozone network throughout the state for compliance, SIP development, control strategy assessment, AQI reporting and forecasting purposes.

Details of the proposed network changes are described in the following site information pages. The significant network changes proposed through 2008 include:

- Establish Trace-CO measurements at the Cornwall Mohawk Mountain site.
- Establish Trace-NOy measurements at the Cornwall Mohawk Mountain and New Haven Criscuolo Park sites.
- Establish continuous sulfate measurements and continuous organic carbon and elemental carbon measurements at the New Haven Criscuolo Park site.
- Establish new Groton Fort Griswold site and terminate Groton Avery Point site.
- Terminate CO measurements at the Stamford Ferguson Library site.

Another significant change to the network includes upgrading the data acquisition system, which is necessary to manage the air quality and meteorological data generated within the network and have it accessible for internal review and validation, AQI reporting and forecasting, and submittal to EPA AQS database. The DRDAS data acquisition system will be installed in 2007 and 2008. It will allow digital data acquisition for all parameters present at the monitoring sites to include valuable diagnostic information to facilitate in validation and analysis. Along with the upgrade to the data acquisition system, the communications will be upgraded throughout the network from phone lines to DSL and AirCards where DSL is not available. This will result in significant cost savings by eliminating instate toll call charges.

Monitoring Site Information

Below is a table with a list of all monitoring sites currently operated by the State of Connecticut. The following pages list detailed information for each monitoring site. The monitoring sites are listed in alphabetical order by site name.

Site Information Tabl

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Town	Site	PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (lo-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	S02	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
Bridgeport	Edison School															Χ														
Bridgeport	Roosevelt School	1/3		Χ			1/6																			Χ				
Cornwall	Mohawk Mountain	1/3			Χ	Χ					Χ	Χ	Χ	Χ	Χ	Т	PT		PT					Χ	Χ	Χ	Χ	Χ	Χ	Х
Danbury	Western Connecticut State University	1/3			Х									X	X	Х								Х	Х	X		Х		
East Hartford	McAuliffe Park	1/1		Χ			1/6							Χ	Χ	Χ	Χ	Χ		Χ	Χ			Χ	Χ	Χ	Χ			Χ
Greenwich	Point Park														Χ	Χ								Χ	Χ	Χ		Χ		
Groton	Avery Point														Χ									Χ	Χ	Χ		Χ		
Groton	Fort Griswold				Р										Р									Р	Р	Р		Р		
Hartford	Brainard Field																						Χ							
Hartford	Morgan Street Courthouse																Х													
Madison	Hammonasset State Park														Х									X	X	X				
Mansfield	DOT													Χ										Χ	Χ	Χ				
Middletown	Connecticut Valley Hospital														Х									X	X	X		Х	Х	
New Haven	Agricultural Center	1/3																												
New Haven	Criscuolo Park	1/1	1/6	Χ	Χ		1/6		Х	Χ		Р	Р	Χ	Χ	Τ	Т	Χ	PT	Χ		Χ		Χ	Χ	Χ	Χ	Χ	Χ	Χ
New Haven	State Street	1/3																												
New Haven	Woodward Avenue Fire House	1/3																												
Norwalk	Health Department	1/3					1/6																							
Norwich	Norwich Courthouse	1/1																												
Stafford	Shenipsit State Forest														Χ									Χ	Χ	Χ				
Stamford	Ferguson Library																Χ													
Stratford	Stratford Lighthouse														Χ											Χ				
Thomaston	Waste Water Treatment Plant	1/3		Х								Х	Х	Х		Т	Т	Х				Х		X	X	X	Х	Х	Х	Х
Waterbury	Meadow & Bank Street	1/3	1/6		Χ		1/6	1/6								Χ								Χ	Χ	Χ		Χ		
Westport	Sherwood Island State Park	1/1					1/6								Х	Х	Т	Х		Х				Х	Х	X	Χ			X

X=Existing, P = Planned, P = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day sampling; 1/6=1-in-6 day sampling

Town – Site: **Bridgeport – Edison School**

County: Fairfield Latitude: 41.195154°
Address: 115 Boston Terrace Longitude: -73.162677°
AQS Site ID: 09-001-0012 Elevation: 34 m (110 ft)

Spatial Scale: **Neighborhood** Year Established: **1983**

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

|--|

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Edison School site is a neighborhood-scale site located in southwestern Connecticut in the town of Bridgeport. This site is located 170 m to the north of Rte 1, 2.2 km to the north of I-95 and 2.7 km to the east of Rte 8. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Bridgeport Edison School monitoring site objective is to collect SO_2 measurements for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the Bridgeport Edison School site will be evaluated in 2008. Given the historic record of SO_2 measurements collected at this site, this site may continue to be operated into the future for trends analysis.

Town – Site: **Bridgeport – Roosevelt School**

County: Fairfield Latitude: 41.170806° Address: Park Avenue Longitude: -73.194943° AQS Site ID: 09-001-0010 Elevation: 7 m (23 ft) Year Established: 1982 Spatial Scale: Neighborhood

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Roosevelt School site is a neighborhood-scale site located in southwestern Connecticut in the town of Bridgeport. This site is located 50 m to the north of I-95 and 200 m to the west of the I-95 and Rte 8 interchange. This coastal site is located in a schoolyard and residential neighborhoods are present in every direction of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Bridgeport Roosevelt School monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI and forecasting purposes.

Town – Site: Cornwall – Mohawk Mountain

County: Litchfield Latitude: 41.821268°
Address: Mohawk Mountain Longitude: -73.297268°
AQS Site ID: 09-005-0005 Elevation: 505 m (1656 ft)

Spatial Scale: Regional Year Established: 198

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:
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PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (lo-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	S02	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
1/3			Х	Х					Х	Х	Х	Х	Х	T	PT		PT					Х	Х	Х	Х	Х	Х	X

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Mohawk Mountain site is a regional-scale site located in northwestern Connecticut in the town of Cornwall. The site is located at the top of Mohawk Mountain with an elevation of 505 m (1656 ft) and is approximately 17 km to the east of the New York border and 25 km to the south of the Massachusetts border. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Cornwall Mohawk Mountain monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI reporting and forecasting purposes. $PM_{2.5}$ chemical speciation measurements are collected through the IMPROVE network. Ozone is measured at the Mohawk Mountain site for compliance assessment and AQI and forecasting purposes. Trace- SO_2 monitoring is being conducted to collect PM precursor gas measurements. Continuous organic carbon (OC) and elemental carbon (EC), sulfate, $PM_{2.5}$ measurements using a Nephelometer are collected as part of the Mid-Atlantic/Northeast Visibility Union (MANE-VU) Rural Aerosol Intensive Network (RAIN) to study the effects of regional haze and to provide data and information to develop the Regional Haze State Implementation Plan. This site is also collecting data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant.

Planned changes through 2008: Trace-CO is planned to be deployed in 2007 and trace-NOy in 2008 as part of the NCore requirements as the Cornwall Mohawk Mountain site is a probable NCore site.

Town – Site: Danbury – Western Connecticut State University
County: Fairfield Latitude: 41.398999°

 Address:
 White Street
 Longitude:
 -73.443241°

 AQS Site ID:
 09-001-1123
 Elevation:
 116 m (380 ft)

Spatial Scale: **Neighborhood** Year Established: **1974**

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Western Connecticut State University (WCSU) site is a neighborhood site located in western Connecticut in the town of Danbury. This site is located on the top level of a parking garage on the WCSU campus. This site is located approximately 140 m to the southeast of I-84 on White Street. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Danbury WCSU monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI and forecasting purposes. Ozone is measured at the Danbury site for compliance assessment and AQI and forecasting purposes. SO_2 is currently measured at this site for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the Danbury site will be evaluated in 2008. This site is also collecting data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant.

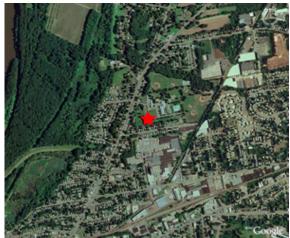
Town – Site: **East Hartford – McAuliffe Park**

County: Hartford Latitude: 41.784710°
Address: McAuliffe Park Longitude: -72.631580°
AQS Site ID: 09-003-1003 Elevation: 15 m (50 ft)
Spatial Scale: Neighborhood Year Established: 1981

Spatial Scale: Neighborhood Year Established: 198 Statistical Area: CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The McAuliffe Park site is neighborhood-scale site located in central Connecticut in the town of East Hartford. The site is located approximately 120 m to the east of Rte 5, 2.0 km to the east of I-91 and 2.5 km to the south of I-291. This site is located 3.7 km to the northeast of the city of Hartford. Residential neighborhoods are located in all directions of this site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The East Hartford McAuliffe Park monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI and forecasting purposes. A PM_{10} FRM is operated for compliance purposes, as well as to gather $PM_{10-2.5}$ measurements. Ozone is measured at the McAuliffe Park site for compliance assessment and AQI and forecasting purposes and PAMS and NO_x monitoring is conducted to obtain measurements of ozone precursors. CO measurements are being collected to complement the PAMS measurements. SO_2 is currently measured at this site for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the McAuliffe Park site will be evaluated in 2008. This site is also collecting data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant.

Town – Site: **Greenwich – Point Park**

County: Fairfield Latitude: 41.004711° Address: Point Park Longitude: -73.585047° AQS Site ID: 09-001-0017 Elevation: 3 m (10 ft) Spatial Scale: Year Established: 1978 Urban









Pollutant and Meteorological Parameters:

FRM	5 FRM colo	FDMS	ВАМ	Nephelometer	FRM (lo-vol)	FRM colo	ВАМ			OC/EC	Sulfate	VC	Ф					(PAMS)	onyls (PAMS)	РАН	ns	Speed	Direction	erature	Point	Fall	netric Pressure	Radiation
PM2.5 FF	PM2.5 FF	PM2.5 FI	PM2.5 B/	PM2.5 N	PM10 FR	PM10 FR	PM10 BA	STN	IMPROVE	Continuous	Continuous	BC/UVC	Ozone	202	00	XON	NOy	/d) soon		Cont. PA	Dioxins	Wind Sp	Wind Dir	Temperature	Dew Poir	Rain Fall	Barometric	Solar Ra
													Χ	Χ								Χ	Χ	Χ		Χ		

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Greenwich Point Park site is an urban-scale site located is southwestern Connecticut on the Long Island Sound in Greenwich. This is a coastal site located approximately 3.0 km to the southeast and 5.0 km to the northeast of the New York border. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Greenwich Point Park monitoring site objectives include collecting ozone measurements for compliance assessment and AQI and forecasting purposes. SO_2 is currently measured at this site for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the Greenwich site will be evaluated in 2008.

Town – Site: Groton – Avery Point

County: New London Latitude: 41.317279° Address: **Avery Point** Longitude: -72.064694° AQS Site ID: 09-011-0008 Elevation: 6 m (20 ft) Year Established: 1985 Spatial Scale: Regional

Statistical Area: MSA (Norwich-New London)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Avery Point site is a regional-scale site located in southeastern Connecticut in the town of Groton. This site is approximately 4.8 km to the south of I-95 on the Long Island Sound. Residential neighborhoods are located to the north of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I; however, nearby trees to the southwest of the site have grown over time and are currently a potential obstruction to the prevailing winds. The Groton Fort Griswold site is currently being established to take the place of the Avery Point site.

Monitoring Objectives: The Groton Avery Point monitoring site objective is to collect ozone measurements for compliance assessment and AQI and forecasting purposes.

Planned changes through 2008: The Groton Avery Point site is planned to be terminated at the end of 2007 or in 2008. Evaluation of the 2007 ozone data from the Avery Point site and the new Groton Fort Griswold site will be conducted and upon approval by the EPA, the Groton Avery Point site will be terminated.

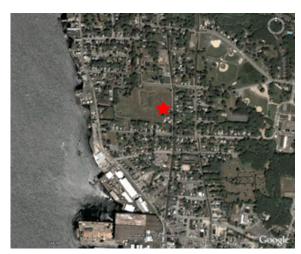
Town – Site: Groton – Fort Griswold

County: New London Latitude: 41.353666°
Address: 141 Smith Street Longitude: -72.078816°
AQS Site ID: 09-011-0124 Elevation: 37 m (120 ft)

Spatial Scale: **Neighborhood** Year Established: **2007**

Statistical Area: MSA (Norwich-New London)





Pollutant and Meteorological Parameters:

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PM2.5 FRM	DAMO E EDAM OO	ϋ	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (Io-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
P				Р										Р									Р	Р	Р		Р		

X=Existing, P =Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Fort Griswold site is a neighborhood-scale site located in southeastern Connecticut in the town of Groton. This site is located approximately 1.1 km to the south of I-95 and 0.5 km to the east of the New London Harbor. Residential neighborhoods are located in all directions of this site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Groton Fort Griswold monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI and forecasting purposes. Ozone is measured at the Fort Griswold site for compliance assessment and AQI and forecasting purposes.

Planned changes through 2008: The Groton Fort Griswold site is planned to be online in mid-2007. The parameters that will be measured at this site are 1-in-3 day $PM_{2.5}$ FRM, continuous $PM_{2.5}$ using the MetOne BAM, ozone, wind speed, wind direction, temperature and rainfall. This site will replace the Groton Avery Point site.

Town – Site: Hartford – Brainard Field

County: Hartford Latitude: 41.745641°
Address: Maxim Road Longitude: -72.648891°
AQS Site ID: Not assigned Elevation: 12 m (39 ft)
Spatial Scale: Neighborhood Year Established: 2003

Spatial Scale: Neighborhood Year Established: 200 Statistical Area: CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

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FRM	FRM colo	: FDMS	BAM	Nephelomet	FRM (Io-vol)	FRM colo	BAM		OVE	nuous OC/EC	nuous Sulfate	UVC	0					(PAMS)	nyls (PAMS)	РАН	SL	Speed	Direction	erature	Point	-all	metric Pressui	Radiation
PM2.5	PM2.5	PM2.5	PM2.5	PM2.5	PM10	PM10	PM10	STN	OBAMI	Continuous	Contin	NN/DB	ozoue	202	ဝ၁	×ON	NOy	VOCs	Carbo	Cont.	Dioxir	Wind	Wind	Temp	Dew F	Rain F	Baron	Solar
																					Χ							

X=Existing, P = Planned, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Brainard Field site is a neighborhood-scale site located in central Connecticut in the eastern part of the city of Hartford. This site is located on the Connecticut River approximately 1.0 km to the east and south of I-91 and the Wilbur Cross Highway. Residential neighborhoods are located in all directions of this site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Hartford Brainard Field monitoring site objective is to collect dioxin measurements for trends analysis. The CTDEP performs audits on the dioxin samplers, but the sample collection and analysis is performed by an outside contractor under the supervision of the CTDEP.

Statistical Area:

Town – Site: Hartford – Morgan Street Courthouse

County: Hartford Latitude: 41.769478° Address: 155 Morgan Street Longitude: -72.674207° AQS Site ID: 09-003-0017 Elevation: 8 m (25 ft) 1984 Spatial Scale: Micro Year Established:

CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

.5 FRM	M2.5 FRM colo	.5 FDMS	.5 BAM	.5 Nephelometer	O FRM (Io-vol)	0 FRM colo	O BAM		ROVE	Continuous OC/EC	ntinuous Sulfate	3C/UVC	Ozone	302	00	NOX	JOy	/OCs (PAMS)	arbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Femperature	Dew Point	Rain Fall	Sarometric Pressure	solar Radiation
PM2	PM2	PM2	PM2	PM2	PM1	PM1	PM1	STN	IMP	Cont	Cont	BC/I	Ozor	SO2	9	NOx	NOy	VOC	Carb	Cont	Diox	Win	Win	Tem	Dew	Rain	Baro	Sola
															Χ													

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Morgan Street Courthouse is a micro-scale site located in central Connecticut in the city of Hartford. This site is located at 155 Morgan Street directly adjacent and below I-84 and is approximately 0.4 km from the I-84 and I-95 interchange. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Morgan Street Courthouse monitoring site objective is to collect CO measurements for compliance purposes. This site is a maximum impact site for CO. This site registers the highest CO measurements in the CTDEP ambient air monitoring network; however, the levels are still well below the NAAQS. This site will likely continue to be operated into the future as a maximum impact site and for historic trends.

Town – Site: Madison – Hammonasset State Park

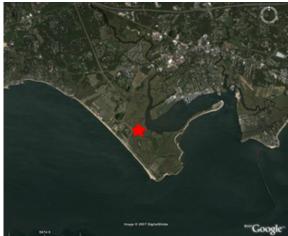
County: New Haven Latitude: 41.259845° Address: Hammonasset SP Longitude: -72.550257° AQS Site ID: 09-009-3002 Elevation: 3 m (10 ft) Year Established: 1981

Spatial Scale: Regional

Statistical Area: **CSA (New York-Newark-Bridgeport)**







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PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelomet	PM10 FRM (Io-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressu	Solar Radiation
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X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Hammonasset State Park site is a regional-scale site located in central coastal Connecticut in the town of Madison. This site is located approximately 1.5 km to the south of Rte 1 and 3.0 km to the south of I-95 on the Long Island Sound. Residential neighborhoods are located primarily to the northeast, north and northwest of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Madison Hammonasset State Park monitoring site objective is to collect ozone measurements for compliance assessment and AQI and forecasting purposes.

Town – Site: Mansfield – DOT

 County:
 Tolland
 Latitude:
 41.731399°

 Address:
 N. Frontage Road
 Longitude:
 -72.211577°

 AQS Site ID:
 09-013-0003
 Elevation:
 76 m (253 ft)

Spatial Scale: Neighborhood Year Established: 2006
Statistical Area: CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Mansfield DOT site is a neighborhood-scale site located in eastern Connecticut to the north of downtown Mansfield. This site is located on North Frontage Road and is 60 m to the north of Rte 6. Residential neighborhoods are located in all directions of this site with the downtown located to the south. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Mansfield DOT site monitoring objective is to collect data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant. The Mansfield site will be operated through the winter of 2007-08, at which time an evaluation of the project will have been conducted and an assessment will be made as to whether the Mansfield site will be integrated into the CTDEP ambient air monitoring network.

Town – Site: Middletown – Central Valley Hospital

 County:
 Middlesex
 Latitude:
 41.552154°

 Address:
 Shew Hall
 Longitude:
 -72.629951°

 AQS Site ID:
 09-007-0007
 Elevation:
 58 m (190 ft)

Spatial Scale: Neighborhood Year Established: 1980 Statistical Area: CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

.5 FRM	2.5 FRM colo	.5 FDMS	.5 BAM	.5 Nephelometer	O FRM (Io-vol)	0 FRM colo	O BAM			OC/EC	Jous Sulfate	UVC	ne			,	,	s (PAMS)	bonyls (PAMS)	t. PAH	xins	peed peed	d Direction	Temperature	v Point	ר Fall	ometric Pressure	ar Radiation
								NLS	IMPROVE	Continuous	Continu	BC/UVC	Ozone	202	ဝ၁	×ON	NOy	d) soon	Carbony	Cont. PA	Dioxins	ds puiW	Mind Di	Tempera	Dew Poi	Rain Fal	Barome	Solar Ra
													Χ									Χ	Χ	Χ		Χ	Χ	

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Middletown Central Valley Hospital site is a neighborhood-scale site located in central Connecticut. This site is located approximately 0.2 km to the east of Rte 9. Residential neighborhoods are located to the west, north and south of this site. This site meets all siting requirements and criteria with the exception of the height requirement. A height requirement waiver has been approved and granted by EPA Region I and EPA Headquarters. This site has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Middletown Central Valley Hospital monitoring site objective is to collect ozone measurements for compliance assessment and AQI and forecasting purposes.

Town – Site: New Haven – Agricultural Center

County: New Haven Latitude: 41.331404°
Address: Huntington Street Longitude: -72.919534°
AQS Site ID: 09-009-2008 Elevation: 40 m (131 ft)

Spatial Scale: **Neighborhood** Year Established: **2003**

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

FRM	.5 FRM colo	.5 FDMS	.5 BAM	.5 Nephelometer	M10 FRM (Io-vol)	D FRM colo	ВАМ		IMPROVE	Continuous OC/EC	Continuous Sulfate	C/UVC	zone	32	0	×o	Оу	OCs (PAMS)	arbonyls (PAMS)	ont. PAH	oxins	ind Speed	ind Direction	emperature	ew Point	ain Fall	arometric Pressure	olar Radiation
PM2.5 F							PM10 B	NLS	OBAMI	Continu	Continu	BC/UV	Ozone	203	00	XON	NOy) sooa	Carbon	Cont. P.	Dioxins	Wind S	Mind D	Temper	Dew Po	Rain Fa	Barome	Solar R
1/3																												

X=Existing, P = Planned, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Agricultural Center site is a neighborhood-scale site located on the northern side of the city of New Haven. The site is approximately 2.0 km to the northwest of the I-91. The site is approximately 3.5 km to the north of the I-91 and I-95 interchange. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The New Haven Agricultural Center monitoring site objective is to collect $PM_{2.5}$ FRM measurements for compliance purposes.

Town – Site: **New Haven – Criscuolo Park**

County: New Haven Latitude: 41.301170° Address: 1 James Street Longitude: -72.902880° AQS Site ID: 09-009-0027 Elevation: 3 m (10 ft) 2004 Spatial Scale: Neighborhood Year Established:

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant	and	Meteor	ological	Parameters:
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PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (Io-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
1/1	1/6	Χ	Χ		1/6		Χ	Χ		Р	Р	Χ	Χ	Т	Τ	Χ	PT	Χ				Χ	Χ	Χ	Χ	Χ	Χ	Χ

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Criscuolo Park site is a neighborhood-scale site located on the western side of the city of New Haven. The site is approximately 0.25 km to the north of the I-95 Quinnipiac River Bridge. The site is approximately 1.0 km to the east of the I-91 and I-95 interchange. Bulk gasoline transfer stations are located 0.3 to 2.0 km to the south of the site. Residential neighborhoods are located to the west, north and east of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The New Haven Criscuolo Park monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI reporting and forecasting purposes. A $PM_{2.5}$ colocated FRM sampler is operated at this site to gather precision measurements. $PM_{2.5}$ chemical speciation measurements are collected through the EPA Speciation Trends Network (STN). A PM_{10} FRM is operated for compliance purposes, as well as to gather $PM_{10-2.5}$ measurements. Ozone is measured at the Criscuolo Park site for compliance assessment and AQI and forecasting purposes and PAMS and NO_x monitoring is conducted to obtain measurements of ozone precursors. Trace-CO measurements are being collected to complement the PAMS measurements. Trace- SO_2 monitoring is being conducted to collect PM precursor gas measurements. This site is also collecting data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant.

Planned changes through 2008: Continuous Sulfate, continuous OC/EC and trace-NOy are planned to be deployed at the New Haven Criscuolo Park site in 2008. These parameters are either required or strongly recommended for NCore sites.

Town – Site: **New Haven – State Street**

County: New Haven Latitude: 41.310728° Address: 715 State Street Longitude: -72.916847° Elevation: AQS Site ID: 09-009-1123 9 m (30 ft) Year Established: 1975 Spatial Scale: Neighborhood









Pollutant and Meteorological Parameters:

X=Existing, P = Planned, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The State Street site is a neighborhood-scale site located in the center of New Haven near the State Street and Trumbull Street intersection. The site is located 0.3 km to the west of I-91 and approximately 1.0 km to the northwest of the I-91 and I-95 interchange. Residential neighborhoods are located to the west, north and south of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The New Haven State Street monitoring site objective is to collect $PM_{2.5}$ FRM measurements for compliance purposes.

Town – Site: New Haven – Woodward Avenue Fire House

County: New Haven Latitude: 41.291253°
Address: Woodward Avenue Longitude: -72.894070°
AQS Site ID: 09-009-0026 Elevation: 21 m (70 ft)

Spatial Scale: **Neighborhood** Year Established: **2003**

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Woodward Avenue Fire House site is a neighborhood-scale site in the city of New Haven. This site is approximately 0.2 km to the north, northeast and east of I-95 and 1.0 km to the southeast of the I-95 Quinnipiac River Bridge. The site is approximately 2.0 km to the southeast of the I-91 and I-95 interchange. Bulk gasoline transfer stations are located 0.75 to 1.5 km to the west and northwest of the site. Residential neighborhoods are located to the east, north and south of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The New Haven Woodward Avenue Fire House monitoring site objective is to collect $PM_{2.5}$ FRM measurements for compliance purposes.

Town – Site: Norwalk – Health Department

County: Fairfield Latitude: 41.112273° Address: 137 East Avenue Longitude: -73.407576° AQS Site ID: 09-001-3005 Elevation: 15 m (50 ft) Spatial Scale: Neighborhood Year Established: 1969

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Norwalk Health Department site is a neighborhood-scale site located in southwestern Connecticut in the town of Norwalk. This is a coastal site located approximately 1.0 km to the north and northwest of I-95. The site is approximately 23 km to the northeast of the New York border. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Norwalk Health Department monitoring site objectives include collecting PM_{2.5} FRM measurements for compliance purposes. A PM₁₀ FRM is operated for compliance purposes, as well as to gather $PM_{10-2.5}$ measurements.

Town – Site: **Norwich – Courthouse**

County: New London Latitude: 41.524116°
Address: 22 Courthouse Sq. Longitude: -72.077850°
AQS Site ID: 09-011-3002 Elevation: 12 m (39 ft)

Spatial Scale: Neighborhood Year Established: 1984

Statistical Area: MSA (Norwich-New London)







Pollutant and Meteorological Parameters:

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Norwich Courthouse site is a neighborhood-scale site located in southeastern Connecticut in the center of the town of Norwich. The site is located in downtown Norwich between Water Street and Cliff Street and is approximately 3.5 km to the east of I-395. Residential neighborhoods are located to the west, north and south of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Norwich Courthouse monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes. Given that the Norwich daily $PM_{2.5}$ design value was within 5% of the new daily $PM_{2.5}$ NAAQS of 35 μ g/m³, everyday $PM_{2.5}$ FRM sampling started on January 1, 2007, and will be conducted for a minimum of three years.

Town – Site: Stafford – Shenipsit State Forest

 County:
 Tolland
 Latitude:
 41.975697°

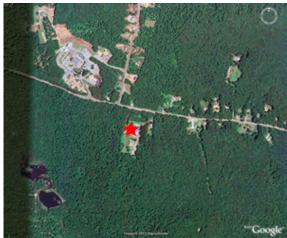
 Address:
 Route 190
 Longitude:
 -72.386813°

 AQS Site ID:
 09-013-1001
 Elevation:
 265 m (869 ft)

Spatial Scale: Regional Year Established: 1980 Statistical Area: CSA (Hartford-West Hartford-Willimantic)







Pollutant and Meteorological Parameters:

PM2.5 FRM PM2.5 FRM colo PM2.5 FRM colo PM2.5 BAM PM2.5 BAM PM2.5 BAM PM1.5 BAM PM1.6 PM10 COLO PM10 FRM (10-vol) PM10 FRM colo PM10 FRM colo PM10 FRM COLO CONTINUOUS SUIFATE BC/UVC CONTINUOUS VOCS (PAMS) CATDONIS VOIC (PAMS) CATDONIS VOIC (PAMS) CONT. PAH DIOXINS WIND DIECTION TEMPERATURE DEW POINT RAIN FAII BATOMETRIC PRESSUIFE SOIAT RADIATION	POI	utai	it a	iia ii	nete	010	.og.	cu.	<u> </u>		· · · ·	· ·																
	ι	.5 FRM col	īΟ	ιċ	.5 Nephelomet	0 FRM (10-v	O FRM	0	STN	0	OC/E	itinuous	2	Ozone	S02	00	NOx	NOy	s (P	onyls (PA	۵	Spe	d Directi	pera	Д	ш	netric Pressur	lar Radi

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Shenipsit State Park site is a regional-scale site that is located in northern Connecticut in the town of Stafford. The site is approximately 100 m to the south of Rte 190, 17 km to the east of I-91 and 12 km to the northwest of I-84. This site is located 34 km to the northeast of the city of Hartford. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Stafford Shenipsit State Park monitoring site objective is to collect ozone measurements for compliance assessment and AQI and forecasting purposes.

Town – Site: Stamford – Ferguson Library

County: Fairfield Latitude: 41.055304° Address: 96 Broad Street Longitude: -73.539021° AQS Site ID: 09-001-0020 Elevation: 9 m (30 ft) 1977 Spatial Scale: Neighborhood Year Established:

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

PM2.5 FRM PM2.5 FRM colo PM2.5 FRM colo PM2.5 BAM PM2.5 BAM PM2.5 BAM PM1.5 BAM PM1.5 BAM PM1.5 BAM PM1.5 BAM PM1.5 BAM PM1.5 BAM PM2.5 BAM PM2.5 BAM PM2.5 BAM PM2.5 BAM PM2.5 BAM PM2.5 BAM Continuous Co/EC Continuous Co/EC Continuous Sulfate STN IMPROVE Continuous Sulfate BC/UVC Ozone SO2 Continuous Sulfate BC/UVC Ozone NOX NOX NOX NOX NOX NOY NOX NOY NOX NOY NOX NOY SO2 Cont. PAH Dioxins Wind Direction Temperature Dew Point Rain Fall Barometric Pressure Solar Radiation

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Ferguson Library site is a neighborhood-scale site located in southwestern Connecticut in the town of Stamford. This is a coastal site located approximately 0.6 to 1.0 km to the north and west of I-95. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Stamford Ferguson Library monitoring site objective is to collect CO measurements for compliance purposes; however, given that CO measurements at this site are well below the NAAQS and other CO monitoring is being conducted in Fairfield County, the necessity to continue collecting CO measurements at the Stamford site will be evaluated in 2007.

Planned changes through 2008: CO monitoring is planned to be terminated at the Stamford Ferguson Library site upon evaluation of the comparison of the CO measurements obtained at the Westport Sherwood Island State Park site and pending EPA approval. At that point, the Stamford site will be taken offline completely.

Town – Site: Stratford – Lighthouse

County: Fairfield Latitude: 41.151887°
Address: Prospect Drive Longitude: -73.103404°
AQS Site ID: 09-001-3007 Elevation: 3 m (10 ft)
Spatial Scale: Regional Year Established: 1980

Spatial Scale: Regional Year Established: Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

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PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelomet	PM10 FRM (Io-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	202	00	XON	NOV	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressur	Solar Radiation
													Χ											Χ				

X=Existing, P = Planned, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Stratford Lighthouse site is a regional-scale site located in southwestern Connecticut in the town of Stratford. This is a coastal site that is located 4.5 km to the southeast of I-95 and is directly on the Long Island Sound. This site is approximately 45 km to the northeast of the New York border. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Stratford Lighthouse monitoring site objective is to collect ozone measurements for compliance assessment and AQI and forecasting purposes.

Town – Site: Thomaston – Waste Water Treatment Plant
County: Litchfield Latitude: 41.644558°
Address: Old Waterbury Rd. Longitude: -73.079307°
AQS Site ID: 09-005-0004 Elevation: 104 m (340 ft)

Spatial Scale: Neighborhood Year Established: 2006

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:		
PM2.5 FRM PM2.5 FRM colo PM2.5 FDMS PM2.5 BAM PM2.5 BAM PM1.5 BAM PM1.5 BAM PM1.5 BAM PM1.6 FRM (10-vol) PM10 FRM colo PM10 FRM colo PM10 FRM colo PM10 FRM colo Continuous OC/EC Continuous OC/EC Continuous Sulfate BC/UVC Continuous Sulfate C	Wind Direction Temperature Dew Point	Rain Fall Barometric Pressure Solar Radiation
[1/3] X X X X	XXX	XXXX

Site Description: The Waste Water Treatment Plant site is a neighborhood-scale site located in western Connecticut in the Naugatuck River Valley in the town of Thomaston. This site is approximately 10 km to the north of I-84 and Waterbury and 0.3 km to the east of Rte 8. This site is approximately 2.5 km south of downtown Thomaston. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

= Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Monitoring Objectives: The Thomaston Waste Water Treatment Plant monitoring site objective is to collect data related to the *Evaluation of Wood Smoke Contribution to Particle Matter in Connecticut* project which is funded through the 2005 EPA Local-Scale Air Toxics Ambient Monitoring grant. The Thomaston site is the core site in the Wood Smoke project. The Thomaston site will be operated through 2007 and through the winter of 2008, at which time an evaluation of the project will have been conducted and an assessment will be made as to what extent the Thomaston site will be integrated into the CTDEP ambient air monitoring network.

Planned changes through 2008: None

X=Existing, P =Planned,

Town – Site: Waterbury – Meadow & Bank Street

County: New Haven Latitude: 41.550460°
Address: Meadow & Bank Longitude: -73.043650°
AQS Site ID: 09-009-2123 Elevation: 80 m (269 ft)

Spatial Scale: **Neighborhood** Year Established: **1975**

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

FRM	FRM colo	FDMS	BAM	Nephelometer	FRM (Io-vol)	FRM colo	ВАМ			OC/EC	us Sulfate							AMS)	Is (PAMS)	Ħ		peed	rection	ature	Point	_	tric Pressure	idiation
PM2.5	PM2.5	PM2.5	PM2.5	PM2.5	PM10 F	PM10 F	PM10 B	STN	IMPROVE	Continuous	Continuo	DVU/JB	Ozone	202	00	XON	NOy	'd) soon	Carbony	Cont. P	Dioxins	Wind Sp	Wind Dir	Temper	Dew Po	Rain Fall	Barometric	Solar Ra
1/3	1/6		Χ		1/6	1/6								Χ								Χ	Χ	Χ		Χ		

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Waterbury site is a neighborhood-scale site located in western Connecticut at Meadow Street and Bank Street in the Naugatuck River Valley. This site is approximately 170 m to the south of I-84, 300 m to the east of Rte 8 and 0.75 km to the east of the I-84 and Rte 8 interchange. Residential neighborhoods are located in all directions of the site. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Waterbury Meadow & Bank Street site monitoring objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes and continuous $PM_{2.5}$ for AQI reporting and forecasting purposes. A PM_{10} FRM is operated for compliance purposes, as well as to gather $PM_{10-2.5}$ measurements. $PM_{2.5}$ and PM_{10} colocated FRM samplers are operated at this site to gather precision measurements. SO_2 is currently measured at this site for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the Waterbury site will be evaluated in 2008.

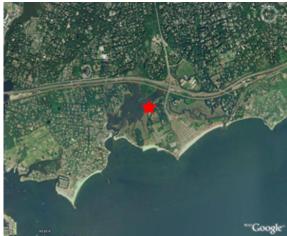
Town – Site: Westport – Sherwood Island State Park

County: Fairfield Latitude: 41.118240°
Address: Sherwood I sland SP Longitude: -73.336765°
AQS Site ID: 09-001-9003 Elevation: 4 m (13 ft)
Spatial Scale: Regional Year Established: 1996

Statistical Area: CSA (New York-Newark-Bridgeport)







Pollutant and Meteorological Parameters:

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PM2.5 FRM	PM2.5 FRM colo	PM2.5 FDMS	PM2.5 BAM	PM2.5 Nephelometer	PM10 FRM (Io-vol)	PM10 FRM colo	PM10 BAM	STN	IMPROVE	Continuous OC/EC	Continuous Sulfate	BC/UVC	Ozone	SO2	00	NOx	NOy	VOCs (PAMS)	Carbonyls (PAMS)	Cont. PAH	Dioxins	Wind Speed	Wind Direction	Temperature	Dew Point	Rain Fall	Barometric Pressure	Solar Radiation
1/1					1/6								Χ	Χ	T	Χ		Χ				Χ	Χ	Χ	Χ			Χ

X=Existing, P = Planned, = Planned to Terminate, T=Trace, 1/1=Everyday sampling, 1/3=1-in-3 day; 1/6=1-in-6 day

Site Description: The Westport Sherwood Island State Park site is a regional-scale site located in southwestern Connecticut. This is a coastal site that is approximately 0.5 km to the south of I-95 on the Long Island Sound. This site meets all siting requirements and criteria and has been approved internally by the CTDEP and independently by EPA Region I.

Monitoring Objectives: The Westport Sherwood Island State Park monitoring site objectives include collecting $PM_{2.5}$ FRM measurements for compliance purposes. Given that the Westport daily $PM_{2.5}$ design value was within 5% of the new daily $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$, everyday $PM_{2.5}$ FRM sampling started on January 1, 2007, and will be conducted for a minimum of three years. A PM_{10} FRM is operated for compliance purposes, as well as to gather $PM_{10-2.5}$ measurements. Ozone is measured at the Westport site for compliance assessment and AQI and forecasting purposes and PAMS and NO_x monitoring is conducted to obtain measurements of ozone precursors. Trace-CO measurements are being collected to complement the PAMS measurements. SO_2 is currently measured at this site for compliance purposes; however given that SO_2 measurements at this site are well below the NAAQS, the necessity to continue collecting SO_2 measurements at the Westport site will be evaluated in 2008.